

September 2, 2004

Chief  
Program Evaluation, Records and Information Services Branch  
Agency for Toxic Substances and Disease Registry  
1600 Clifton (E60)  
Atlanta, GA 30333

RE: Public Health Assessment for the Omaha Lead Refinery  
EPA Facility ID: NESFN0703481

Dear Sir/Madam:

Gould Electronics (Gould) is submitting the following comments on the above referenced Public Health Assessment (PHA) dated June 7, 2004. Gould does not have access to the data that ATSDR used in developing the PHA and consequently, is not in a position to provide independent analysis of the site data. Hence, these comments are focussed on analyses that Gould believes should be incorporated into the PHA prior to issuing the final report. Gould does not take issue with ATSDR's conclusion that children's exposure to lead should be reduced. That conclusion is applicable to most, if not all, urban residential settings. However, after reviewing the draft PHA, Gould believes that a more rigorous and in-depth analysis of the public health issues in Omaha as they relate to lead needs to be performed prior to drawing conclusions about what interventions are appropriate.

ATSDR's analysis of the lead issues within the Omaha Lead Site is overly simplistic and consequently comes to the premature conclusion that EPA's plan to excavate soils with lead concentrations above 400 mg/kg will have beneficial impact on children's blood lead levels. The PHA does not explore the relative importance of the various sources of exposure, including lead-based paint and interior dust, before drawing its conclusion. ATSDR does not take advantage of the unique opportunity that is presented at this site where there has been active case management for children with elevated blood lead in combination with a soil removal program that has been ongoing for several years. Unlike at many sites where the beneficial effect of a proposed remedy is hypothetical, in Omaha, the hypothesis that soil removal alone will reduce children's blood lead levels can be actually tested with data. The results of this data analysis can then be used to optimize the intervention efforts so that the maximum benefit in reducing children's blood lead levels can be achieved.

According to the PHA, since 1999, EPA has conducted soil removal at 403 properties, 224 of which had children with elevated blood lead levels. The report does not state what the corresponding soil lead levels were at those properties or show a relationship between elevated soil and blood lead at those properties. The Douglas County Health Department has said that it performs follow-up on children with elevated blood lead until the child has two consecutive readings below 10 µg/dl so the necessary data should be readily available to ATSDR. The report should provide information on whether the removal of soil has reduced the blood lead of the children living at those properties (beyond declines in blood lead expected as a result of national declines), and the results of any follow-up blood lead testing. The PHA quotes a study that concluded that an increase of soil lead from 100 to 1000 ppm would result in an increase in blood lead of 5.7 µg/dl. If this study was from another site, it may not be relevant for this site due to differences in lead bioavailability. ATSDR should have access to the data to show whether the soil removal that has taken place over the past several years results in a similar decrease, and if not, to answer the question, why not.

ATSDR states that 96% of the children with blood lead levels above 15 µg/dl live in homes built before 1950 and makes a general statement that "most" children with elevated blood lead levels live in areas (not properties) where at least one soil lead level exceeded 400 mg/kg. The report should state what percent of children with a blood lead level above 15 µg/dl (or 10µg/dl) live at a property where the average soil lead concentration for the yard, excluding the drip zone sample, exceeds 400 mg/kg. Clearly, the data were available to ATSDR. The blood lead / soil lead database (1420 data points) analyzed by EPA in the Baseline Risk Assessment includes 139 children with elevated blood lead levels who live in homes where the average soil lead is less than 400 mg/kg, and only 39 children with elevated blood lead levels who live in homes where the average soil lead is greater than 400 mg/kg. This suggests that the most important source of lead, i.e., lead based paint is being overlooked or ignored. This type of analysis along with an analysis of the inter-relationship of the various lead sources (i.e., the contribution of lead based paint to soil concentrations in the drip zone) would allow at least an initial assessment of the relative contribution of lead-based paint and soil lead towards elevated blood lead levels.

ATSDR has provided no independent analysis in its report that supports a 400 mg/kg soil lead cleanup level. ATSDR clearly contemplates that a site-specific application of the IEUBK Model will be performed for the Omaha site to develop a site-specific clean-up level:

"EPA directs...that 400 ppm soil lead be used as the screening level for evaluating clean-up of lead-contaminated soil. They further direct that actual remediation levels be based largely on the results of entering site-specific values into the IEUBK Model." (page 17-18), and

"...ATSDR considers residential soil contaminated at concentrations that exceed EPA's clean-up level to be a public health risk whether that level is the current 400 ppm or a revised number that also meets the 5% risk criteria..." (page 26)

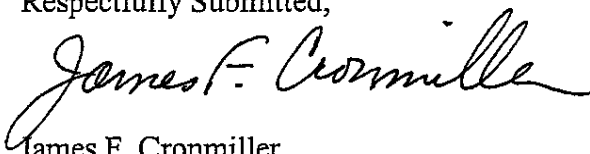
However, the risk assessment did not develop site-specific values for most of the exposure parameters in the IEUBK Model and the 400 mg/kg cleanup level is nothing more than the default. The ATSDR report appears to present the logic that since elevated blood lead levels in children occur in the same general geographic area as soil lead levels above 400 mg/kg, then the soil lead is the cause of the elevated blood lead without further analysis. If 96% of the children with blood lead levels above 15  $\mu\text{g}/\text{dl}$  live in houses built before 1950, and if these houses exhibit peeling paint and/or are in poor condition, there is little doubt that lead-based paint is the *major* contributor to their elevated blood lead levels. Further, EPA's risk assessment shows that 79% of the children<sup>1</sup> with blood lead levels above 10  $\mu\text{g}/\text{dL}$  live in residences with soil lead levels below 400 mg/kg. The relationship between children's blood lead levels and *both* lead-based paint and soil lead needs to be further explored and discussed in detail in the PHA.

The PHA also does not discuss the dust lead levels in these homes and its relationship to paint lead, soil lead or blood lead. According to EPA's IEUBK model, 55% of a child's daily soil/dust intake comes from the ingestion of dust, yet the PHA does not discuss this important pathway with site data nor does the report present what is known about the presence of lead-based paint in these houses. The presence of lead-based paint in these houses will strongly influence dust lead concentrations, which in turn will have a strong effect on blood lead levels. The PHA should include an analysis of the relationship between interior dust lead and blood lead before concluding that soil removal is an effective intervention at soil lead levels above 400 mg/kg. The PHA should also include an analysis of the relationship between soil lead and dust lead, to estimate the effects of soil remediation on dust lead and therefore blood lead levels.

When there are limited financial resources to address environmental concerns, no matter what the funding source, responsible public health agencies like ATSDR need to look closely at whether the expenditure truly addresses the primary cause of the health concern, in this case, childhood lead exposure. The PHA does not support a conclusion that soil removal at properties where lead concentrations are above 400 mg/kg addresses the primary source of childhood lead exposure.

Gould appreciates the opportunity to submit these comments and looks forward to ATSDR performing a more complete analysis prior to issuing its final report.

Respectfully Submitted,



James F. Cronmiller  
Director, Corporate Environmental Affairs

JFC

---

<sup>1</sup> This percent refers to the 1420 paired soil lead / blood lead measurements examined in the risk assessment.